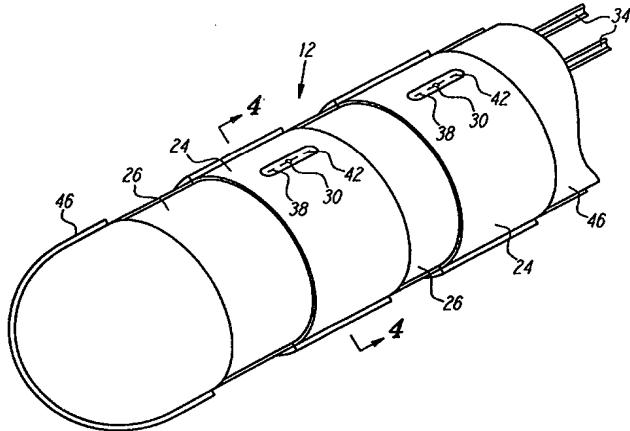


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(21) International Application Number: PCT/US98/12300 (22) International Filing Date: 12 June 1998 (12.06.98)  (30) Priority Data: 08/879,343 20 June 1997 (20.06.97) US  (71) Applicant: EP TECHNOLOGIES, INC. [US/US]; 2710 Orchard Parkway, San Jose, CA 95134-2012 (US).  (72) Inventors: SWANSON, David, K.; 877 Heatherstone Way #705, Cupertino, CA 95014 (US). YANG, Yi; 2394 45th Avenue, San Francisco, CA 94116 (US). WHAYNE, James, G.; 17930 Los Felice Drive, Saratoga, CA 95070 (US). KOBLISH, Josef, V.; 1055 Manet Street, Sunnyvale, CA 94087 (US).  (74) Agents: BURSE, David, T. et al.; Lyon & Lyon LLP, Suite 4700, 633 West Fifth Street, Los Angeles, CA 90071-2066 (US).	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
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(54) Title: SURFACE COATINGS FOR CATHETERS, DIRECT CONTACTING DIAGNOSTIC AND THERAPEUTIC DEVICES



## (57) Abstract

A catheter including a distal end assembly having an external surface coating. Where the distal end assembly includes electrodes or other electrical components, the coating is preferably electrically conductive. Such an electrically conductive coating is formed from a material comprising regenerated cellulose, although other materials such as a hydrogel or a plastic having an electrically conductive component are utilizable. Where the distal end assembly includes optical or ultrasonic components, the regenerated cellulose coating is suitable. The robustness of the surface coating permits the manufacture and utilization of electrode configurations that are formed on a non-conductive base member by processes such as pad printing, vapor deposition, ion beam assisted deposition, electroplating and other printed circuit manufacturing processes. Additionally, because the surface coating produces a smooth outer surface to the distal end assembly, lead wires and temperature sensing devices can be bonded to the exterior surface of electrodes and then coated to produce a smooth outer surface; thus providing a simple, inexpensive manufacturing method for the attachment of such components to the electrodes.

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**A. CLASSIFICATION OF SUBJECT MATTER**

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Minimum documentation searched (classification system followed by classification symbols)

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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Y	WO 92 20396 A (BRITISH TECH GROUP) 26 November 1992 see claims; figure 1 ---	1-34
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  ESPINOSA, M

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